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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/026,871 | 12/21/2001 | Hiroyuki Kawae | 01-764 | 1848 |

7590 06/24/2010
Gregory P. LaPointe
BACHMAN & LaPOINTE, P.C.
900 Chapel Street, Suite 1201
New Haven, CT 06510-2802

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| EXAMINER |
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QUARTERMAN, KEVIN J

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| ART UNIT | PAPER NUMBER |
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2889

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06/24/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/026,871 | Applicant(s) KAWAE ET AL. | |
| | Examiner Kevin Quarterman | Art Unit 2889 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06172005; 09212005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's response received 01 August 2008 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5 and 7-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Soules (US 6,252,254).
4. Regarding independent claim 1, Figure 1 of Soules shows a light-permeable fluorescent cover (14) to be attached on a light emitting diode (12) which emits a first light having a first peak in a first wavelength range, the cover comprising a fluorescent material for producing second and third lights upon excitation by the first light, the second light having a second peak in a second wavelength range away from the first peak, and the third light having a third peak in a third wavelength range away from the first and second peaks, wherein the first, second and third lights are mixed into a synthesized new light (col. 1, ln. 50-55; col. 2, ln. 27-30).
5. Regarding claim 2, Soules discloses the first, second, and third lights in no optically complementary color relation to each other (col. 1, ln. 50-55).

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6. Regarding claim 3, Soules discloses the first, second, and third lights having primary three optical colors (col. 1, ln. 50-55).
7. Regarding claim 4, Soules discloses the first light being blue, and the first wavelength being a blue wavelength range, the second third lights being respectively green and red, and the second and third wavelengths being respectively green and red wavelength ranges (col. 1, ln. 50-55).
8. Regarding claim 5, Soules discloses the fluorescent material including fluorescent lanthanoid aluminates activated by manganese (Abstract).
9. Regarding claim 7, Soules discloses the first peak being from 420nm to 480nm (col. 3, ln. 57-59); the second peak being from 490nm to 550nm (col. 4, ln. 11-14); and the third peak being from 660nm to 720nm (col. 5, ln. 15-18).
10. Regarding claim 8, Soules discloses the fluorescent cover comprising a base material formed of one or more resins selected from the group consisting of silicon, polyester, acrylic acid, epoxy, urethane, nylon, polyamide, polyimide, vinyl chloride, polycarbonate, polyethylene, Teflon, polystyrene, polypropylene and polyolefin (col. 3, ln. 55-56).
11. Regarding claim 9, Figure 2 of Soules shows the cover having a varied thickness along emission intensity distribution of the light-emitting diode.
12. Regarding claim 10, Figure 1 of Soules shows the cover being attached on and in close and clinging contact to the light-emitting diode.
13. Regarding claim 11, Soules discloses the cover being made of a material that is thermally shrinkable (col. 3, ln. 55-56).

14. Regarding claim 12, Figure 3 of Soules shows a light permeable adhesive agent (38) adhering the cover (34) to the light-emitting diode (32).

15. Regarding claim 13, the method of forming the device is not germane to the issue of patentability of the device itself (MPEP § 2113). Therefore, the limitation of the method of forming the cover has not been given patentable weight.

16. Regarding claim 14, Soules discloses the fluorescent material including manganese (Abstract).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soules (US 6,252,254) in view of Akashi (US 6,414,426).

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20. Regarding claim 6, Soules teaches the limitations of claim 4 discussed earlier but fails to exemplify the fluorescent material being shown by at least one selected from chemical formulae of: $\text{LaAl}_{11}\text{O}_{18}:\text{Mn}^{2+}$, $\text{La}_2\text{O}_311\text{Al}_2\text{O}_3:\text{Mn}^{2+}$, $\text{La}_{1-x}\text{Al}_{11(2/3)+x}\text{O}_{19}:\text{Mn}^{2+}_x$ ($0.1 \leq x \leq 0.99$), $(\text{La}, \text{Ce})\text{Al}_{11}\text{O}_{19}:\text{Mn}^{2+}$, and $(\text{La}, \text{Ce})\text{MgAl}_{11}\text{O}_{19}:\text{Mn}^{2+}$.

21. Akashi teaches a light source having a fluorescent material being shown by at least one of the above materials (col. 4, ln. 47-55).

22. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the fluorescent material taught by Akashi in the device of Soules, since it is known to select a known material based on its suitability for its intended use (MPEP § 2144.07).

Response to Arguments

23. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Komoto (US 6,340,824) discloses a semiconductor light emitting device including a fluorescent material. Shimizu (US 5,998,925) discloses a light emitting device with nitride compound semiconductor. Lowery (US 5,959,316) discloses multiple encapsulation of LEDs. Mori (US 6,459,197) discloses a fluorescent lamp.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571)272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571) 272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin Quarterman
Examiner
Art Unit 2889

/Toan Ton/
Supervisory Patent Examiner, Art Unit 2889

/K. Q./
Examiner, Art Unit 2889
24 June 2010